

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) An inverter system equipped with an inverter,
said inverter comprising:
an upper ECU operating under electric supply of a low-voltage battery;
a communication microcomputer receiving an instruction from said upper ECU;
a motor control microcomputer receiving an instruction from said communication microcomputer;
a gate driving circuit controlled by said motor control microcomputer; and
a switching element driven by said gate driving circuit for converting a direct current of a high-voltage battery into an alternating current to drive a motor,
wherein
said upper ECU and said communication microcomputer are connected to each other via high-speed communication means to transmit instructions,
said communication microcomputer and said motor control microcomputer are connected to each other via low-speed communication means to transmit instructions,
an insulation boundary is defined between said communication microcomputer and said motor control microcomputer to isolate a low-voltage side electric component receiving electric power of said low-voltage battery from a high-voltage side electric component receiving electric power of said high-voltage battery, and
insulation signal transmitting means is disposed on said insulation boundary to assure insulation and transmit signals.

2. (Original) The inverter system in accordance with claim 1, wherein said motor drives an electrically-driven compressor for an automotive vehicle.

3. (Original) The inverter system in accordance with claim 1, wherein said high-speed communication means has a communication speed exceeding 20 kbps.

4. (Original) The inverter system in accordance with claim 3, wherein said high-speed communication means is a CAN protocol.

5. (New) An inverter, comprising:

a communication microcomputer receiving a first instruction transmitted from an external apparatus;

a high speed communicator which sets a communication speed of the first instruction transmitted to said communication microcomputer at a first value;

a load control microcomputer receiving a second instruction transmitted from said communication microcomputer;

a low speed communicator which sets a communication speed of the second instruction transmitted to said load control microcomputer at a second value lower than the first value;

a gate driving circuit controlled by said load control microcomputer;

a switching element driven by said gate driving circuit;

an insulator, serving as an boundary between said communication microcomputer and said load control microcomputer, which isolates an electric component of a low voltage area receiving electric power of a first voltage battery from an electric component of a high voltage area receiving electric power of a second voltage battery of which a voltage is higher than that of said first voltage battery; and

an insulation signal transmitter, disposed on said insulator, which assures insulation of said electric component of said low voltage area from said electric component of said high voltage area, and through which the second instruction is transmitted.

6. (New) The inverter system in accordance claim 5, wherein said load control microcomputer controls a motor through said gate driving circuit and said switching element, and said motor drives an electrically-driven compressor for an automotive vehicle.

7. (New) The inverter system in accordance with claim 5, wherein said high speed communicator has a communication speed exceeding 20 kbps.

8. (New) The inverter system in accordance with claim 7, wherein said high speed communicator in a CAN protocol.

9. (New) The inverter system in accordance with claim 1, wherein said load control microcomputer, said gate driving circuit and said switching element are disposed in the high voltage area to receive the electric power of the second voltage battery.